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USPT	111 and 115	6	<u>L16</u>
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USPT	('4117063' '4937284' '4333898' '4058583' '4289860' '5112919')[PN]	6	<u>L13</u>
USPT	110 and 111	43	<u>L12</u>
USPT	extruder or extruded or extruding	136448	<u>L11</u>
USPT	18 and 19	50	<u>L10</u>
USPT	granulate or granules or granulated or granulating	100528	<u>L9</u>
USPT	16 and 17	313	<u>L8</u>
USPT	ldpe or polyethylene or ethylene polymer	265323	<u>L7</u>
USPT	13 and 15	564	<u>L6</u>
USPT	14.ab.	4146	<u>L5</u>
USPT	silane or trimethoxysilane or vinyltrimethoxysilane	45646	<u>L4</u>
USPT	cable or wire	558171	<u>L3</u>

L1 FILE 'CAPLUS' ENTERED AT 18:24:11 ON 10 JAN 2002
1 S JP04293945/PN

L2 FILE 'DPCI' ENTERED AT 18:27:42 ON 10 JAN 2002
1 S JP04293945/PN OR WO0036612/PN
L3 2 S JP04293945/PN OR WO200036612/PN
SEL PN.G

L4 FILE 'CAPLUS' ENTERED AT 18:28:42 ON 10 JAN 2002
1 S E1/PN

L5 FILE 'DPCI' ENTERED AT 18:32:25 ON 10 JAN 2002
1 S US4289860/PN
SEL PN.G

L6 FILE 'CAPLUS' ENTERED AT 18:33:05 ON 10 JAN 2002
0 S L2-E12/PN
L7 7 S E2-E12/PN
L8 7 S L7 NOT L4

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AN 1998:561362 CAPLUS
 DN 129:169066
 TI Semiconductive resin composition, its preparation, and a power cable using it
 IN Yoshida, Yoshie; Mizutani, Toshikazu; Kitagawa, Masaki; Deguchi, Jichio
 PA Mitsubishi Chemical Corp., Japan
 SO Eur. Pat. Appl., 17 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM H01B001-24
 CC 76-2 (Electric Phenomena)
 Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 858081	A2	19980812	EP 1998-102132	19980206
	EP 858081	A3	19990203		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 10279769	A2	19981020	JP 1998-24254	19980205
	CA 2228925	AA	19980807	CA 1998-2228925	19980206
	US 5985181	A	19991116	US 1998-20897	19980209 <--
PRAI	JP 1997-24972		19970207		

AB There is provided a semiconductive resin compn. comprising: (A) 5-100 parts by wt. of a modified ethylene copolymer obtainable by subjecting an ethylene copolymer and a vinyl monomer to graft polymn. conditions; (B) 0.5-15 parts by wt. of an unsatd. silane compd.; (D) 10-110 parts by wt. of C black; and (E) 0-95 parts by wt. of an ethylene copolymer, based on 100 parts by wt. total of (A) and (E); the component (B) is incorporated into the compn. by subjecting the component (B) to melt graft reaction together with the component (A) and/or component (E) in the presence of 0.01-2 parts by wt. of a radical generator (C); the vinyl monomer unit is contained in an amt. of 5-35% by wt. of the total amt. of the components (A) and (E); and the degree of crosslinking of the compn. is 30-90% by wt.

ST semiconductive resin compn prodn use; power cable semiconductive resin

IT Carbon black, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (Vulcan XC72 and Denka Black; in prepn. of semiconductive resin compn. for power cables)

IT Crosslinking
 Graft polymerization
 (in prepn. of semiconductive resin compn. for power cables)

IT Silanes
 RL: RCT (Reactant); TEM (Technical or engineered material use); USES (Uses)
 (in prepn. of semiconductive resin compn. for power cables)

IT Electric cables
 (power; prepn. of semiconductive resin compn. for)

IT Semiconductor materials
 (prepn. of semiconductive resin compn. for power cables)

IT Polymers, uses
 RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (prepn. of semiconductive resin compn. for power cables)

IT 9003-53-6P, Polystyrene 9010-86-0P, Ethylene-ethyl acrylate copolymer 24937-78-8P, Ethylene-vinyl acetate copolymer 35312-82-4P, Ethylene-vinyltrimethoxysilane copolymer
 RL; DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (prepn. of semiconductive resin compn. for power cables contg.)

AN 1998:561362 CAPLUS
 DN 129:169066
 TI Semiconductive resin composition, its preparation, and a power cable using it
 IN Yoshida, Yoshie; Mizutani, Toshikazu; Kitagawa, Masaki; Deguchi, Jichio
 PA Mitsubishi Chemical Corp., Japan
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 DT Patent
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 CC 76-2 (Electric Phenomena)
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FAN.CNT 1

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	EP 858081	A3	19990203		
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	JP 10279769	A2	19981020	JP 1998-24254	19980205
	CA 2228925	AA	19980807	CA 1998-2228925	19980206
	US 5985181	A	19991116	US 1998-20897	19980209 <--
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ST	semiconductive resin compn prodn use; power cable semiconductive resin				
IT	Carbon black, uses				
	RL: TEM (Technical or engineered material use); USES (Uses) (Vulcan XC72 and Denka Black; in prepn. of semiconductive resin compn. for power cables)				
IT	Crosslinking				
	Graft polymerization (in prepn. of semiconductive resin compn. for power cables)				
IT	Silanes				
	RL: RCT (Reactant); TEM (Technical or engineered material use); USES (Uses) (in prepn. of semiconductive resin compn. for power cables)				
IT	Electric cables				
	.(power; prepn. of semiconductive resin compn. for)				
IT	Semiconductor materials				
	(prepn. of semiconductive resin compn. for power cables)				
IT	Polymers, uses				
	RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (prepn. of semiconductive resin compn. for power cables)				
IT	9003-53-6P, Polystyrene 9010-86-0P, Ethylene-ethyl acrylate copolymer 24937-78-8P, Ethylene-vinyl acetate copolymer 35312-82-4P, Ethylene-vinyltrimethoxysilane copolymer				
	RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (prepn. of semiconductive resin compn. for power cables contg.)				

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
 AN 1993:104471 CAPLUS
 DN 118:104471
 TI Silane-crosslinked resin semiconductive compositions for cable covering
 IN Nishiyama, Hidemi; Kimura, Hitoshi
 PA Furukawa Electric Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM C08L023-08
 ICS C08K003-04; C08K005-14; C08K005-54; C08K005-56; H01B001-24
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04293945	A2	19921019	JP 1991-60448	19910325 <--
AB	The title compns comprise ethylene (I) polymers 60-95, .gtoreq.1 I copolymers with vinyl acetate, propylene, Et acrylate (II), Me acrylate, and/or acrylic acid 5-40, elec. conductive carbon 15-80, org. silanes 0.5-10.0, org. peroxides 0.05-5.0, and silanol condensation catalysts 0.01-3.0 parts. Thus, a 5.7-mm-diam. twisted wire was covered with a compn. contg. LLDPE 80, I-II copolymer 20, elec. conductive carbon 60, vinyltrimethoxysilane 2.0, dicumyl peroxide 0.2, dibutyltin dilaurate 0.1, and Irganox 1010 0.3 part and crosslinked in water at 80.degree. for 24 h to form a 1.0-mm semiconductive layer showing elongation 350% and good surface smoothness.				
ST	silane crosslinking ethylene polymer semiconductor				
IT	Semiconductor materials				
	Plastics, extruded				
	RL: USES (Uses)				
	(silane-crosslinked ethylene polymers contg. carbon, for covering of cables)				
IT	Alkenes, polymers				
	RL: USES (Uses)				
	(.alpha.-, polymers, with ethylene, linear low-d., silane-crosslinked, for semiconductive sheathing for cables)				
IT	74-85-1D, Ethylene, polymers with .alpha.-olefins and vinyltrimethoxysilane 2768-02-7D, Vinyltrimethoxysilane, polymers with polyolefins 9010-77-9D, Acrylic acid-ethylene copolymer, polymers with polyolefins and vinyltrimethoxysilane 9010-79-1D, Ethylene-propylene copolymer, polymers with polyolefins and vinyltrimethoxysilane 9010-86-0D, Ethyl acrylate-ethylene copolymer, polymers with polyolefins and vinyltrimethoxysilane 24937-78-8D, Ethylene-vinyl acetate copolymer, polymers with polyolefins and vinyltrimethoxysilane 25103-74-6D, Ethylene-methyl acrylate copolymer, polymers with polyolefins and vinyltrimethoxysilane				
	RL: USES (Uses)				
	(crosslinked, contg. carbon, for semiconductive covering of cables)				
IT	7440-44-0, Carbon, properties				
	RL: PRP (Properties)				
	(elec. conductive, silane-crosslinked ethylene polymers contg., for semiconductive coverings of cables)				
IT	107240-66-4, Ethylene-propylene-vinyltrimethoxysilane graft copolymer 113408-96-1, Ethyl acrylate-ethylene-vinyltrimethoxysilane graft copolymer				
	RL: USES (Uses)				
	(linear low-d., silane-crosslinked, for semiconductive covering of cables)				

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L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
 AN 1993:104471 CAPLUS
 DN 118:104471
 TI Silane-crosslinked resin semiconductive compositions for cable covering
 IN Nishiyama, Hidemi; Kimura, Hitoshi
 PA Furukawa Electric Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08L023-08
 ICS C08K003-04; C08K005-14; C08K005-54; C08K005-56; H01B001-24
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 76
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04293945	A2	19921019	JP 1991-60448	19910325 <--
AB	The title compns comprise ethylene (I) polymers 60-95, .gtoreq.1 I copolymers with vinyl acetate, propylene, Et acrylate (II), Me acrylate, and/or acrylic acid 5-40, elec. conductive carbon 15-80, org. silanes 0.5-10.0, org. peroxides 0.05-5.0, and silanol condensation catalysts 0.01-3.0 parts. Thus, a 5.7-mm-diam. twisted wire was covered with a compn. contg. LLDPE 80, I-II copolymer 20, elec. conductive carbon 60, vinyltrimethoxysilane 2.0, dicumyl peroxide 0.2, dibutyltin dilaurate 0.1, and Irganox 1010 0.3 part and crosslinked in water at 80.degree. for 24 h to form a 1.0-mm semiconductive layer showing elongation 350% and good surface smoothness.				
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	Plastics, extruded				
	RL: USES (Uses)				
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IT	Alkenes, polymers				
	RL: USES (Uses)				
	(.alpha.-, polymers, with ethylene, linear low-d., silane-crosslinked, for semiconductive sheathing for cables)				
IT	74-85-1D, Ethylene, polymers with .alpha.-olefins and vinyltrimethoxysilane 2768-02-7D, Vinyltrimethoxysilane, polymers with polyolefins 9010-77-9D, Acrylic acid-ethylene copolymer, polymers with polyolefins and vinyltrimethoxysilane 9010-79-1D, Ethylene-propylene copolymer, polymers with polyolefins and vinyltrimethoxysilane 9010-86-0D, Ethyl acrylate-ethylene copolymer, polymers with polyolefins and vinyltrimethoxysilane 24937-78-8D, Ethylene-vinyl acetate copolymer, polymers with polyolefins and vinyltrimethoxysilane 25103-74-6D, Ethylene-methyl acrylate copolymer, polymers with polyolefins and vinyltrimethoxysilane				
	RL: USES (Uses)				
	(crosslinked, contg. carbon, for semiconductive covering of cables)				
IT	7440-44-0, Carbon, properties				
	RL: PRP (Properties)				
	(elec. conductive, silane-crosslinked ethylene polymers contg., for semiconductive coverings of cables)				
IT	107240-66-4, Ethylene-propylene-vinyltrimethoxysilane graft copolymer 113408-96-1, Ethyl acrylate-ethylene-vinyltrimethoxysilane graft copolymer				
	RL: USES (Uses)				
	(linear low-d., silane-crosslinked, for semiconductive covering of cables)				

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L1: Entry 1 of 1

File: DWPI

Oct 22, 1998

DERWENT-ACC-NO: 1992-394623

DERWENT-WEEK: 199847

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TITLE: Silane-crosslinked semiconducting resin compsn. for power cable covering - is prepd. by mixing and kneading mixt. contg. polyethylene, ethylene@! copolymers, organo:silane cpd.

PATENT-ASSIGNEE:

ASSIGNEE

CODE

FURUKAWA ELECTRIC CO LTD

FURU

PRIORITY-DATA: 1991JP-0060448 (March 25, 1991)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2813487 B2	October 22, 1998		010	C08L023/08
JP 04293945 A	October 19, 1992		011	C08L023/08

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP 2813487B2	March 25, 1991	1991JP-0060448	
JP 2813487B2		JP 4293945	Previous Publ.
JP04293945A	March 25, 1991	1991JP-0060448	

INT-CL (IPC): C08K 3/04; C08K 5/14; C08K 5/54; C08K 5/56; C08L 23/08; H01B 1/24

ABSTRACTED-PUB-NO: JP04293945A

BASIC-ABSTRACT:

The compsn. is characterised in that it is prepd. by mixing and kneading an intimate mixt. comprising 60-95 pts. wt. of a polyethylene, 5-40 pts. wt. of one or more ethylene copolymers selected from EVA copolymer, ethylene-propylene copolymer, ethylene-ethyl acrylate copolymer and ethylene-methyl acrylate copolymer, 15-80 pts. wt. of an electricoconductive carbon black and an organosilane cpd. with 0.05-5.0 pts. wt. of an organic peroxide and 0.01-3.0 pts. wt. of a silanol condensation catalyst.

The polyethylene is pref. e.g. a linear low density polyethylene (L-LDPE). The organosilane cpd. is, e.g. vinyl trimethoxysilane. The pref. organic peroxide is, e.g. dicumyl peroxide. The silanol condensation catalyst is, e.g. dibutyltin dilaurate.

USE/ADVANTAGE - Used as a semiconducting layer of power cable covering. It does not form any voids at the interface with outer insulating layer and gives good insulation characteristicref

CHOSEN-DRAWING: Dwg.0/5

TITLE-TERMS: SILANE CROSSLINK SEMICONDUCTOR RESIN COMPOSITION POWER CABLE COVER

PREPARATION MIX KNEAD MIXTURE CONTAIN POLYETHYLENE POLYETHYLENE@ COPOLYMER ORGANO
SILANE COMPOUND

DERWENT-CLASS: A17 A85 E19 L03

CPI-CODES: A04-G01E; A07-A02; A08-C05; A08-M01D; A08-R03; A09-A03; A11-A03;
A12-E02A; E05-E02D; E05-F01; E10-A04B; E31-N04D; L03-A01B1; L03-A02E;

CHEMICAL-CODES:

Chemical Indexing M3 *01*

Fragmentation Code

C106 C810 M411 M782 M903 M904 M910 Q130 Q454 Q610

R043

Specific Compounds

05085M

Registry Numbers

92407

Chemical Indexing M3 *02*

Fragmentation Code

B414 B713 B720 B741 B831 H7 H713 H721 M210 M211

M212 M250 M272 M281 M283 M320 M411 M510 M520 M530

M540 M782 M903 M904 Q121 Q130 Q454 Q610 R043

Markush Compounds

199248-C6901-M

Registry Numbers

92407

Chemical Indexing M3 *03*

Fragmentation Code

G010 G019 G100 K0 K9 K930 M280 M313 M322 M331

M340 M342 M373 M392 M414 M510 M520 M532 M540 M782

M903 M904 M910 Q130 Q454 Q610 R043

Specific Compounds

00476M

Registry Numbers

92407

Chemical Indexing M3 *04*

Fragmentation Code

A350 A923 A960 J0 J011 J1 J171 M210 M214 M225

M231 M250 M262 M281 M282 M320 M411 M510 M520 M530

M540 M620 M630 M650 M782 M903 M904 M910 Q121 Q130

Q454 Q610 R043

Specific Compounds

00415M

Registry Numbers

92407

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0415U; 0476U ; 1669U ; 5085U ; 5402U

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0032 0037 0150 0205 0218 0219 0224 0226 0231 0239 0241 0242 0250 0495 0537
0544 0789 1058 2020 2217 2291 2292 2300 2302 2330 2551 2653 2727 3006 3020 3151 3153
3155 3158 3319

Multipunch Codes: 014 02& 034 04- 040 041 046 047 050 066 067 074 075 076 08& 081 082
083 116 15- 17& 229 231 266 27& 28& 292 299 307 308 310 341 392 41- 44& 444 473 477 48-
506 509 531 54& 575 58& 595 688 690 720 723

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1992-175161